

## Technical Data Sheet

### PMMA Alloy M1800

#### PRODUCT DESCRIPTION:

M1800 is a PMMA alloy with high gloss, high toughness, super highweather resistance and excellent anti-scratch performance

#### FEATURES:

- High gloss
- High weather resistance

#### APPLICATION:

- Pillar trim panel
- Rear view mirror housing

Properties <sup>1</sup>	Standard	Condition	Unit	Typical Value <sup>2</sup>
<b>Physical</b>				
Density	ISO 1183	g/cm <sup>3</sup>	23°C	1.16
Mold Shrinkage	ISO 294	23°C, 48hr	%	0.4 - 0.6
Melt Flow Rate	ISO 1133	220°C, 10kg	g/10 minutes	6
<b>Mechanical</b>				
Tensile Strength at Yield	ISO 527	50mm/min	MPa	62
Flexural Strength <sup>3</sup>	ISO 178	2mm/min	MPa	78
Flexural Modulus	ISO 178	2mm/min	MPa	2200
Notched Charpy Impact	ISO 179	4J, 23°C	kJ/m <sup>2</sup>	5
Notched Charpy Impact	ISO 179	4J, -30°C	kJ/m <sup>2</sup>	1.5
Rockwell Hardness	ISO 2039	23°C	R-scale	115
<b>Thermal</b>				
Heat Deflection Temperature <sup>4</sup>	ISO 75	120°C/hr, 1.80MPa	°C	85
Vicat Softening Temperature	ISO 306	50°C/hr, 5kg	°C	102
<b>Other Properties</b>				
Flammability	UL-94	Class	1.6mm	HB
Volume resistivity	IEC 60093	Ohm-cm	/	>1.E+15
Surface resistivity	IEC 60093	Ohm	/	>1.E+15

Processing Parameters		Value	Unit
<b>Pre-treatment</b>			
Drying Temperature		80 ~ 90	°C
Drying Time		3 ~ 4	hour
Maximum moisture content		≤0.02	%
<b>General Guidelines<sup>1</sup></b>			
Barrel Temperature	Rear	220 ~ 240	°C
	Middle	230 ~ 250	°C
	Front	240 ~ 260	°C
Nozzle		240 ~ 260	°C
Melt Temperature		240 ~ 260	°C
Mold Temperature		50 ~ 80	°C
Back Pressure		1 ~ 5	MPa
Screw Speed		30 ~ 50	rpm

#### Note1 :

1. Values are measured at 23°C and in RH of 50% on injection molded specimens.
2. Typical values for uncolored products, not specifications, and may vary slightly with different colors.
3. Flexural strength is tested without fixed deflection.
4. HDT: specimens are unannealed.

#### Note2 :

1. The general guidelines are only for reference. Exact settings have to follow the product and machine conditions.

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